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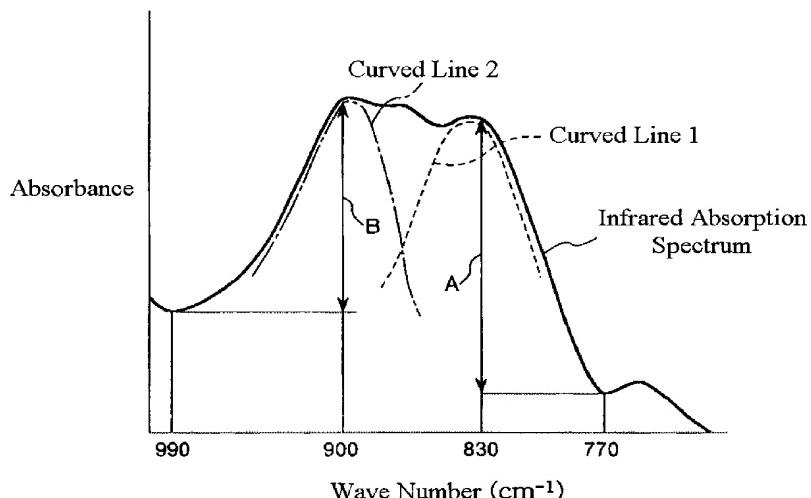
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(54) Title: GATE INSULATING FILM COMPRISING SILICON AND OXYGEN



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(57) Abstract: A gate insulating film 3 is formed of an insulative inorganic material containing silicon and oxygen as a main material. The gate insulating film 3 contains hydrogen atoms. A part of the absorbance of infrared radiation of which wave number is in the range of 830 to 900  $\text{cm}^{-1}$  is less than both the absorbance of infrared radiation at the wave number of 830  $\text{cm}^{-1}$  and the absorbance of infrared radiation at the wave number of 900  $\text{cm}^{-1}$  when the insulating film to which an electric field has never been applied is measured by means of Fourier Transform Infrared Spectroscopy at room temperature. Further, in the case where the absolute value of the difference between the absorbance of infrared radiation at the wave number of 830  $\text{cm}^{-1}$  and the absorbance of infrared radiation at the wave number of 770  $\text{cm}^{-1}$  is defined as A and the absolute value of the difference between the absorbance of infrared radiation at the wave number of 900  $\text{cm}^{-1}$  and the absorbance of infrared radiation at the wave number of 990  $\text{cm}^{-1}$  is defined as B, then A and B satisfy the relation: A/B is 1.8 or more.



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